Evaluation of a Preoperative Clinic for Women With Gynecologic Cancer

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Although many patients with gynecologic cancer undergo surgery, time constraints during the preoperative consultation may affect the accuracy of the information exchange, as well as compromise the quality of the patient assessment and care plan. Both put patients at a higher risk for complications during surgery and the postoperative period. This article describes an advanced practice RN–led preoperative assessment and education clinic designed to improve the quality of preoperative preparation and postoperative outcomes of patients with gynecologic cancer.

At a Glance

• Among patients with gynecologic cancer, surgery is the major treatment modality.
• The success of surgery depends on many factors, and a failure to identify those risks may negatively affect surgical outcomes and hospital length of stay.
• A preoperative assessment and education clinic led by advanced practice RNs has been shown to improve preoperative preparation and postoperative outcomes in patients with gynecologic cancer.

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he burden of cancer diagnosis and treatment for women with gynecologic cancer is profound. Surgical intervention is the major treatment modality for this patient population, but the success of surgical interventions depends on a complex interplay of factors, including the patient’s physical condition, psychological distress, financial stability, and social support. Failure to identify those risk factors in women with gynecologic cancer prior to surgery has been shown to adversely affect surgical outcomes and hospital length of stay (LOS) (Dean, Finan, & Kline, 2001; Ellis, Spiers, Coutts, Fairburn, & McCracken, 2012; Fleisher, 2009; Vilar-Compte et al., 2008).

Increases in surgical complications and psychological distress in preoperative patients with gynecologic cancer have been attributed to inadequate preoperative assessment, preparation, and planning, as well as limited opportunities for clinic staff to increase patients’ understanding of the diagnosis and recommended treatment (Cimprich, 1999; Love, 2004; Mc- Corkle et al., 2009). Ideally, an individual patient risk assessment and tailored preoperative preparation plan should be created in the outpatient setting at the initial cancer diagnosis (Schofield et al., 2005). Preoperative patient assessments are known to lower patient anxiety while increasing identification of modifiable risk factors for surgical complications. However, a drastic rise in patient volume and an increase in patient and family expectations for additional information related to the diagnosis and care plan have placed time constraints on the healthcare team, resulting in unmet expectations and compromised information exchange. This, in turn, puts patients at a higher risk of complications during the perioperative period (Jie et al., 2012; Seibaek, Blaakaer, Petersen, & Hounsgaard, 2015).

Although the importance of preoperative information is well recognized, studies continuously report that patients lack adequate information, care coordination, and therapeutic relationships with providers (Guest, Manderville, & Thompson, 2012; Jolley, 2007).

Background

Clinics led by advanced practice RNs (APRNs) have been developed to address time constraints and fulfill patients’ perceived unmet needs, identify risks, improve the quality of service, and address actual or potential problems through teamwork (Loftus & Weston, 2001). For example, evaluation of a nurse-coordinated multidisciplinary preoperative assessment program for older adults demonstrated a reduction in LOS from 8.9 to 4.9 days and a decrease in serious postoperative complications from about 9% to 2% (Ellis...
et al., 2012). In addition, several studies described APRN-led preoperative interventions designed specifically to address the needs of women with gynecologic cancer. In one case, a preoperative support program aimed at health promotion and early rehabilitation for women undergoing ovarian cancer surgery proved effective in identifying comorbidities and emotional distress; the program also functioned as a way to assess patients’ need for preoperative medication adjustments and further testing, as well as improved patients’ physical health (Seiback et al., 2013). In another study, a clinical nurse specialist-led clinic designed to improve the experience of patients with gynecologic cancer before admission for major pelvic surgery was shown to have addressed patients’ preoperative needs and enabled postoperative planning; however, the sample size of this evaluation was small (Guest et al., 2012).

The current article describes a tailored intervention to improve the quality of preoperative screening of women with gynecologic cancer in the Gynaecological Oncology Department at the KK Women’s and Children’s Hospital in Singapore. The study’s primary objective was to determine whether an intervention—an APRN-led preoperative assessment and education (APAE) clinic for women with gynecologic cancer—would result in a lower hospital LOS (compared to the pre-intervention mean LOS). The secondary objective was to evaluate the rate of referrals from gynecologic oncologists to the APRN clinic and APRN referrals to other health professionals to explore other resources needed for patients.

Methods

This quality improvement project used a descriptive design to evaluate the pre- and postintervention LOS, incoming referral rates from gynecologic oncologists, and outgoing referral rates from APRNs in the clinic to other healthcare professionals. A convenience sample included women with confirmed or suspected gynecologic cancer aged 15 years or older who visited the APAE clinic from December 2014 to February 2015 prior to their surgery. As a baseline for comparison, data were extracted from the hospital’s electronic patient medical records on patients from the same time period of the previous year (December 2013 to February 2014) who would have met the criteria for referral to the APAE clinic had it existed at that time.

Clinic Operations

The APAE clinic runs concurrently with the gynecologic oncologists’ clinics. APRNs working in the clinic perform the following duties.

- Conduct a detailed medical history, physical examination, and assessment of psychosocial and nutritional status.
- Bridge patients’ knowledge gaps related to diagnosis and treatment plans.
- Develop individualized care plans.
- Review care plans with patients and family members.
- Educate patients and family members about pre- and postoperative care using the pre- and postoperative pamphlet (an educational pamphlet concerning care for patients with gynecologic cancer).
- Provide psychosocial support and discuss available services if patients are distressed or have caregiver issues following hospital discharge.
- Make referrals to other healthcare professionals according to referral criteria.
- Provide postclinic follow-up for patients who are at risk of poor self-care.

The Duke Institutional Review Board and SingHealth Centralized Institutional Review Board reviewed the current quality improvement project, which was found to have exempt status.

Analysis

Data were analyzed using SPSS®, version 22.0. Descriptive statistics were used, and a Mann-Whitney U test was performed to measure the difference between pre- and post-LOS because the data were not normally distributed (U = 1561.5). A p value of less than 0.05 was considered to be statistically significant. A total of 66 patients were seen in the APAE clinic. One patient went for a second opinion. Therefore, the LOS is based on 65 inpatients, whereas the referral rates are based on 66 outpatients.

Results

Length of Stay

The mean LOS before (n = 70) and after (n = 65) APAE clinic implementation was 8.5 days and 5.8 days, respectively, for patients undergoing surgeries including total hysterectomy, pelvic lymphadenectomy, para-aortic lymphadenectomy, and omentectomy. In addition, the median LOS before and after implementation was 6.5 and 5 days, respectively, and the distributions in the groups differed significantly (p = 0.002). The longest LOS before implementation was 30 days, and the LOS for seven patients was more than 15 days because of wound breakdown and social overstay (which refers to patients who are medically certified for discharge but remain in the hospital because of issues related to postdischarge caregiving). The longest LOS after implementation was 15 days for two patients. Of these two patients, one was unsuccessful in community home application despite an early social worker referral, and the other had a longer LOS because of a persistent larger amount of abdominal drainage. The shortest LOS before implementation was three days, and the shortest LOS after implementation was two days.

Incoming and Outgoing Referral Rates

Incoming APAE clinic referral rates started low in the first month (70%, 16 of 23), and then increased in the second (85%, 28 of 33) and third (92%, 22 of 24) months of implementation. APRNs referred 23 of 66 patients to other healthcare professionals. These referrals included 23 medical referrals (15 to anesthesiologists, 3 to family medicine practitioners, 3 to general practitioners and polyclinics, and 2 to cardiologists) and 10 social worker referrals. Reasons for physician and anesthetist referrals were cardiac conditions, newly diagnosed diabetes mellitus (DM), poorly controlled DM, hypertension, and severe obesity. The analyses revealed that 36 patients had at least one or more comorbidities.

Discussion

Results from the current study support and affirm the important role that APRNs play in the preoperative phase of cancer treatment, indicating that the APAE clinic presented a supportive and caring environment. This type of environment also provided adequate interaction time to prepare patients for gynecologic cancer surgeries, which is consistent with previous
studies in the literature. The clinic intervention successfully lowered the LOS through enhanced pre- and postoperative assessment and patient education.

The APAE clinic visit affected the mean LOS as evidenced by the reduction of the preclinic average following implementation. Although many factors may have contributed to the decreased LOS, including a new suturing technique and an increase in laparoscopic surgeries, careful assessment of each patient’s medical condition before surgery was shown to play a role in reducing LOS. The clinic addressed several of the major contributors to extended LOS, including wound breakdown, poor diabetes management, lack of postsurgical mobility, and social overstay behaviors.

For example, the rate of postoperative wound breakdown decreased following the introduction of APAE clinic services. In addition, staff managed diabetes promptly and properly. As supported by Gilmartin (2004), effective preparation, including physical assessment and health education, was found to have a positive effect on outcomes for patients with diabetes. During APAE clinic visits, staff discovered that two patients had DM and that one had poorly controlled DM. To manage these patients, the clinic’s APRNs did the following.

- Educate patients about diet, exercise, and the short- and long-term risks of uncontrolled DM, emphasizing surgical wound healing and DM control and highlighting the impact of delayed cancer treatment because of poor wound healing.
- Refer patients to physicians with memoranda for further management.
- Advise patients to regularly monitor and report blood sugar levels to APRNs.

By providing patient education on skin preparation, postoperative pain management, early mobilization, and discharge planning, the clinic was able to influence patients’ expectations about what they could anticipate before and after surgery and make appropriate home care arrangements earlier, effectively shortening LOS. During the study, staff observed a greater willingness on the part of clinic patients to ambulate in the first postoperative day. Early mobilization is likely to have resulted from more effective pain management, which has also been shown to promote recovery (Lin & Wang, 2005) and earlier hospital discharge (Devine et al., 1999). Social overstay was another major factor of prolonged LOS before implementation. The earlier referrals made to social services by APRNs for home care arrangements also led to shorter hospital stays. In addition, the clinic’s APRNs also observed a significant postintervention reduction in the number of social overstay patients, a major factor that had contributed to prolonged LOS before the clinic opened.

Limitations
The study used a convenience sample, and the pre- and postintervention samples were not completely matched. During the study period, not all patients undergoing gynecologic cancer surgery were seen in the APAE clinic; consequently, results cannot be generalized for the whole population of patients with gynecologic cancer.

Implications for Nursing
An APRN-led preoperative assessment and education clinic can help to address the individual needs of women with cancer and improve quality of care. The provision of cancer care will always be a multidisciplinary activity, and APRNs have a unique role to play in collaborating within the cancer team and promoting continuous improvement. Rapport built with patients during the initial cancer diagnosis stage is important in each patient’s cancer journey and helps to improve effective APRN-patient communication.

The APAE clinic became a part of the surgical bundle for gynecologic surgery in the Gynaecological Oncology Department at the KK Women’s and Children’s Hospital. APRNs must now continue to develop and refine the preoperative services that meet the needs of patients undergoing surgery, as well as extend the service to all patients.

Conclusion
The success of surgery depends on numerous factors concerning patients and the healthcare team. The reduction of LOS and improvement in outcomes, as shown in the current quality improvement study, supports previous studies that explored the role of APRNs in improving preoperative preparation and postoperative outcomes for patients with gynecologic cancer. This can be accomplished by proactively identifying and addressing patients’ complex needs and working collaboratively with the healthcare team.

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References


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